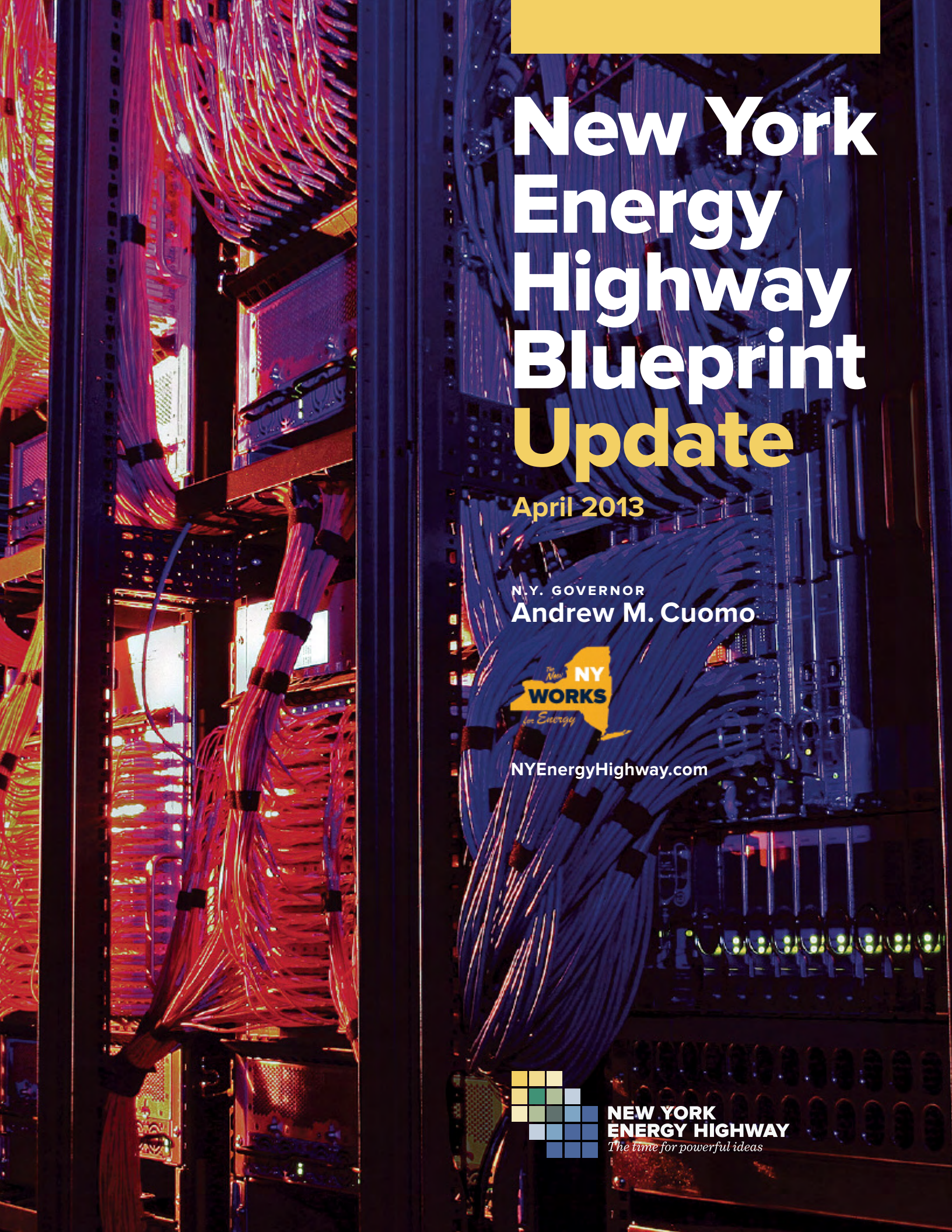


New York Energy Highway Blueprint Update

April 2013

N.Y. GOVERNOR
Andrew M. Cuomo

NYEnergyHighway.com

NEW YORK ENERGY HIGHWAY
The time for powerful ideas



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Energy Highway Task Force

TOP ROW

Gil C. Quiniones, (Co-Chair) President and Chief Executive Officer, New York Power Authority

Joseph Martens, (Co-Chair) Commissioner, New York State Department of Environmental Conservation

BOTTOM ROW

Kenneth Adams, President, Chief Executive Officer and Commissioner, Empire State Development

Garry A. Brown, Chairman, New York State Public Service Commission

Francis J. Murray, Jr., President and Chief Executive Officer, New York State Energy Research and Development Authority

Honorable Andrew M. Cuomo
Governor of the State of New York
State Capitol
Albany, N.Y. 12224

Dear Governor Cuomo:

It is with great satisfaction that we submit this Update to the New York State Energy Highway Blueprint, which reflects the progress to date on each of the Blueprint's 13 recommended actions. We are confident that the measures taken thus far and those to follow will fulfill the objectives of your historic call to modernize New York's statewide energy system through a wide-ranging, public-private partnership that will ensure a reliable, affordable, and clean power supply to drive economic growth and meet the needs of our citizens far into the future.

In the period since we presented the Blueprint to you on October 22, 2012, New York has witnessed the devastating effects of Superstorm Sandy on many elements of its infrastructure, including our electric power system, providing vivid new reminders of that system's importance and vulnerabilities. Fortunately, this same period has been marked by a strong and encouraging start to the implementation of the Energy Highway initiative, which will upgrade and revitalize the system and, among numerous other benefits, enhance its resilience in the face of severe weather events.

The actions we recommended in the Blueprint will expand and strengthen the Energy Highway, accelerate construction and repair, support clean energy, and drive technology innovation. We are pleased to report that each of the actions is moving forward on or ahead of schedule. Among the highlights:

- The New York Public Service Commission issued orders to examine plans and alternatives to give downstate customers access to upstate power generation by easing transmission congestion; to plan for possible major power plant retirements; and to study the expansion of natural gas delivery to residences and business in New York State.
- The New York Power Authority Board of Trustees approved a Life Extension and Modernization Program for NYPA's decades-old transmission system in Western, Central, and Northern New York.
- The New York State Energy Research and Development Authority issued a $250 million Renewable Portfolio Standard solicitation targeting electric generation projects that will use clean-energy resources to help the State diversify its overall electric energy portfolio.

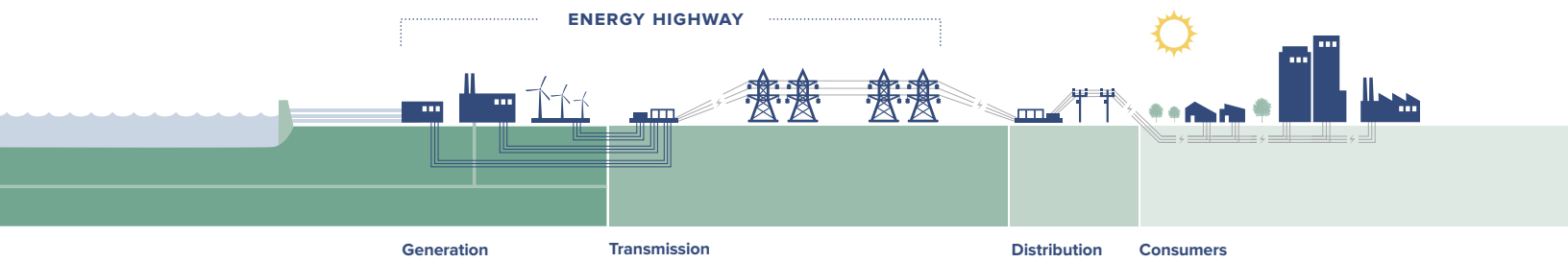
The public-private partnerships created through the Blueprint action items are the foundation upon which the State will develop the most advanced energy system in the nation. These projects will stimulate economic development, create jobs, and protect the environment in communities across New York.

With the submittal of this Update, the Energy Highway Task Force will formally disband and will turn over responsibility for the various actions to the appropriate State agencies and authorities. We have been privileged to serve on your Task Force, knowing that the actions set forth in the Blueprint will benefit New Yorkers for generations to come. While the process has just begun, and we have much work to do, our respective agencies remain committed to realizing your vision for the modernization of New York's electric system.

Gil C. Quiniones **Joseph Martens** **Kenneth Adams** **Garry A. Brown** **Francis J. Murray, Jr.**

Introduction

On October 22, 2012, Governor Andrew M. Cuomo's New York Energy Highway Task Force presented to him the New York Energy Highway Blueprint, an innovative multi-faceted plan to upgrade and modernize the State's energy infrastructure to meet the needs of a strong and growing economy for New York residents for decades to come. Exactly one week later, the critical role of a reliable electric power supply was dramatically demonstrated when Superstorm Sandy slammed into New York and other states, causing billions of dollars in damage, disrupting the economy, and crippling mass transit. In New York State alone, more than 2.1 million customers, mostly in New York City and the Hudson Valley and on Long Island, lost electricity for varying periods.



Each of the 13 actions is underway and moving forward on or ahead of the aggressive schedule the Task Force established.



The pervasive effects of the loss of power underscored in striking fashion the importance and relevance of the Energy Highway initiative, an unprecedented partnership between the public and private sectors that calls for installing up to 3,200 megawatts (MW) of new electric generation and transmission capacity in New York State, including clean renewable power generation, while creating jobs, promoting economic growth, and protecting the environment.

While New York's electric power providers have compiled a longstanding record of reliable service, the need to address challenges to the State's aging power grid had been evident before Superstorm Sandy struck. Recognizing these issues, Governor Cuomo put forward the Energy Highway initiative in his January 2012 State of the State address, and quickly named a Task Force consisting of senior energy, environmental, and economic development officials to implement it.

The resulting Energy Highway Blueprint, calling for public and private investments in the State's energy system of about $5.7 billion over the next five to 10 years, proposed 13 specific actions, divided among four major categories:

Expand and Strengthen the Energy Highway



Accelerate Construction and Repair



Support Clean Energy



Drive Technology Innovation

As detailed in this Update, each of the 13 actions is underway and is moving forward on or ahead of the aggressive schedule that the Task Force established.

The diverse measures reflect both the scope of the Energy Highway initiative and the magnitude of the challenges it is designed to address in a unified, coordinated manner. The actions will open the way to modernize our aging transmission infrastructure and prepare for the potential retirement of existing power plants. They will enhance the State's existing systems for delivering electricity and natural gas. They will expand the use of renewable energy, and make New York a leader in the development and deployment of Smart Grid technologies that will define the power systems of the future.

The following summary reflects the substantial progress that has been achieved thus far for each of the individual actions set forth in the Blueprint.

Expand and Strengthen the Energy Highway

Initiate Alternating Current transmission upgrades to increase the capacity to move excess power from upstate to downstate

The New York State Public Service Commission (PSC), in an Order issued on November 30, 2012 (Case 12-T-0502), began a first-of-its kind proceeding to solicit formal proposals from current transmission owners and other potential developers of new transmission lines in the heavily congested pathways linking upstate and Central New York with the Lower Hudson Valley and New York City. The PSC issued an Order on April 18, 2013 establishing a competitive Article VII process for the consideration of alternatives to provide the 1,000 MW of desired upgrades, calling for initial applications to be filed in October 2013.

The Commission's actions are in response to the Blueprint's call for investing $1 billion to develop 1,000 MW of new Alternating Current (AC) transmission capacity, with preference for projects built along existing rights-of-way or involving the upgrade of existing lines to mitigate environmental impacts. Easing the current transmission constraints will enhance system reliability and supply diversity, and will provide significant economic and environmental benefits by permitting excess power from upstate sources, including renewable energy facilities, to reach the downstate areas of greatest need.

Develop and implement Reliability Contingency Plans to prepare for potential large power plant retirements

In another November 30, 2012 Order (Case 12-E-0503), the PSC began a proceeding to ensure that plans will be in place to meet reliability needs in the event of the retirement of major power plants in the State. The Commission specifically directed Consolidated Edison Company of New York (Con Edison) to work with the New York Power Authority (NYPA) and others to develop a contingency plan, which was submitted on February 1, 2013, to address the potential retirement of the Indian Point Energy Center in Westchester County, a two-unit, 2,066 MW nuclear facility that is a major source of power for New York City and Westchester.

Following a March 2013 Order allowing the utilities to issue a Request for Proposals (RFP), NYPA issued an RFP on April 3, 2013 for a target of

1,350 MW of incremental generation and transmission capacity, with bids due May 20, 2013. In an April 2013 Order, the Commission allowed the utilities to undertake preliminary development activities for their proposed transmission solutions (subject to further review and action when the Commission reviews the RFP responses), required Con Edison to file a more refined Energy Efficiency and Demand Reduction plan within 45 days of the Order, and directed DPS staff to issue a straw proposal to address cost recovery and cost allocation issues for further comments.

Provide public power entities flexibility in contracting for public-private partnerships

Legislation is being drafted to strengthen the ability of the State's two public power entities—the New York Power Authority and the Long Island Power Authority—to enter into public-private partnerships as called for in the Blueprint. It is anticipated that the bill will be introduced for consideration in the 2013 Legislative session.



Accelerate Construction and Repair

Accelerate investments in electric generation, transmission, and distribution for reliability, safety, and storm resilience

On December 18, 2012, the New York Power Authority's Board of Trustees approved a Life Extension and Modernization program to support the availability and reliability of NYPA's transmission system and ensure its regulatory compliance. In addition, beginning with the pending rate cases involving National Grid and Con Edison, the PSC will address efforts by Investor-Owned Utilities to upgrade their systems.

Statewide, the Energy Highway Blueprint recommended the accelerated investment of $800 million through 2017 to improve electric utility infrastructure, with a focus on efforts such as reducing repair backlogs and increasing responsible tree trimming near transmission and distribution lines. An enhanced ability to withstand and recover from severe storms would be among the benefits.

Accelerate investments in natural gas distribution to reduce costs to consumers and promote reliability, safety, and emission reductions

The PSC, in a third Order issued on November 30, 2012 (Case 12-G-0297), established a proceeding to examine its policies concerning natural gas service in New York State and to consider measures to reduce barriers to

Easing the current transmission constraints will enhance system reliability and supply diversity and permit excess power upstate to reach the downstate areas of greatest need.

the expanded use of natural gas by residential and business customers, especially for heating. Such measures, it said, could include expansion of the natural gas delivery system.

The Blueprint recommended accelerated utility investment in natural gas infrastructure of up to $500 million over the next five years, including efforts to benefit the environment by replacing older, leak-prone natural gas pipes.



Support Clean Energy

Conduct a competitive solicitation for renewable resources in New York as part of the State's Renewable Portfolio Standard

The New York State Energy Research and Development Authority (NYSERDA) has made $250 million available through a Request for Proposals (RFP) process for the development of renewable energy projects. It is anticipated that contracts will be awarded by summer 2013. The Blueprint called for investment of up to $675 million in public and private funds to develop renewable energy sources.

Initiate transmission upgrades in Northern New York to help facilitate renewable energy development

NYPA is in the process of implementing upgrades to a portion of an existing transmission line from Massena to Plattsburgh and is evaluating improvements to several of its other transmission facilities in Northern New York. The Blueprint proposed actions to ease transmission congestion in the region, providing consumers access to current and proposed wind energy projects and other renewable sources.

Characterize offshore wind resources

NYSERDA is working with other state agencies to address jurisdictional issues and research priorities, as well as on other matters concerning the potential development of wind resources off New York's Atlantic coast. The Blueprint called for building on previous preliminary site assessments for potential projects.

Initiate process for repowering of inefficient power plants on Long Island

A pending power supply agreement between the Long Island Power Authority (LIPA) and National Grid (recently approved by LIPA Board of Trustees) enables studying the economic feasibility of repowering five



older power plants on Long Island. The effort would initially focus on the Port Jefferson and E. F. Barrett steam facilities, with the issuance of an RFP to conduct the necessary assessments. The Blueprint envisioned investing $1.5 billion to $2 billion to develop up to 750 MW of repowered capacity on the Island.

Require utilities to evaluate repowering as an alternative to power plant retirements when the plant is needed for reliability

The PSC issued an Order on January 18, 2013 (Case 12-E-0577) requiring National Grid and New York State Electric and Gas (NYSEG) to conduct an

analysis of repowering of the Dunkirk and Cayuga facilities. Both utilities have filed the costs of their transmission upgrades and solicited bids (received March 19, 2013) from the plant owners for the level of out-of-market support required to finance the repowering of their facility. National Grid and NYSEG are expected to file their analysis and recommendations by May 2, 2013.

Establish a Community Support Plan and Greenhouse Gas Emissions Reduction Program in the electricity sector

The State Department of Environmental Conservation (DEC), NYSERDA, and PSC have collaborated with other states to reduce the current emissions cap under the Regional Greenhouse Gas Initiative (RGGI) CO_2 cap and trade program. On February 7, 2013, the RGGI states proposed lowering the regional CO_2 emissions cap by 45%. This reduction is expected to generate additional revenue for reinvestment, some of which could be available to fund the new programs recommended in the Blueprint to offset the adverse impacts of power plant retirements on host communities and to promote more efficient plant operation.



Drive Technology Innovation

Fund Smart Grid demonstration projects

Following a Request for Proposals (RFP), in 2012 NYSERDA announced the recipients of nearly $10 million in funding for studies, product development, and demonstration projects to strengthen the State's power grid. A new round of solicitations is planned, using $20 million obtained under a federal settlement with Constellation Energy stemming from charges of power market manipulation by the utility. The Blueprint proposed investing an estimated $190 million to build on the State's existing Smart Grid Technology and Market Development Program.

Develop an Advanced Energy Management System Control Center and pursue federal energy research grants

In line with the Blueprint's call for an expanded Smart Grid commitment, NYPA is moving ahead with plans for the control center, which would facilitate design and testing of new equipment and technology for Smart Grid applications.


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In addition to the 13 actions, the Blueprint put forward a number of policy recommendations. As noted in the Update, there has been progress in several of these areas as well, including looking to provide long-term certainty for renewable energy development beyond 2015, and evaluating cost-recovery opportunities for offshore wind.

The publication of this Update culminates an eventful first year in which the Energy Highway initiative moved from the vision of Governor Cuomo's State of the State address, to the recommendations of the Blueprint, and to the actions that are currently in progress. As part of a transparent and inclusive process, the Task Force in April 2012 issued a Request for Information that attracted 130 responses from 85 entities that, along with subsequent comments from interested parties, provided invaluable guidance in the development of the Blueprint. Two conferences, with a total attendance of more than 670 people, and an active website further promoted widespread awareness of the program's goals and activities.

Now, with the Energy Highway initiative on solid footing, the Task Force will disband, leaving continued implementation of the program to the individual State agencies responsible for each action, in cooperation with their prospective partners in the public and private sectors. The significant progress anticipated in 2013 and ensuing years promises to transform the way in which energy is produced and delivered in New York State, with ongoing benefits to the State's consumers, its economy, and its environment.

TABLE 1

Update on Energy Highway Task Force Actions

ACTION	STEPS TAKEN
EXPAND AND STRENGTHEN THE ENERGY HIGHWAY	
Initiate Alternating Current transmission upgrades to increase the capacity to move excess power from upstate to downstate	PSC Orders issued
Develop and implement Reliability Contingency Plans to prepare for potential large power plant retirements	PSC Orders issued
Provide public power entities flexibility in contracting for public-private partnerships	Legislation being drafted
ACCELERATE CONSTRUCTION AND REPAIR	
Accelerate investments in electric generation, transmission, and distribution for reliability, safety, and storm resilience	NYPA program approved by its Board
Accelerate investments in natural gas distribution to reduce costs to consumers and promote reliability, safety, and emission reductions	PSC Order issued
SUPPORT CLEAN ENERGY	
Conduct a competitive solicitation for renewable resources in New York as part of the State's Renewable Portfolio Standard	RFP issued
Initiate transmission upgrades in Northern New York to help facilitate renewable energy development	Article VII permit filing in progress
Characterize offshore wind resources	Study scoping in progress
Initiate process for repowering of inefficient power plants on Long Island	LIPA Board approved Power Supply Agreement
Require utilities to evaluate repowering as an alternative to power plant retirements when the plant is needed for reliability	PSC Order issued
Establish a Community Support Plan and Greenhouse Gas Emissions Reduction Program in the electricity sector	RGGI states proposed emissions cap reduction
DRIVE TECHNOLOGY INNOVATION	
Fund Smart Grid demonstration projects	Awarded funding for five projects
Develop an Advanced Energy Management System Control Center and pursue federal energy research grants	Control center scoping in progress

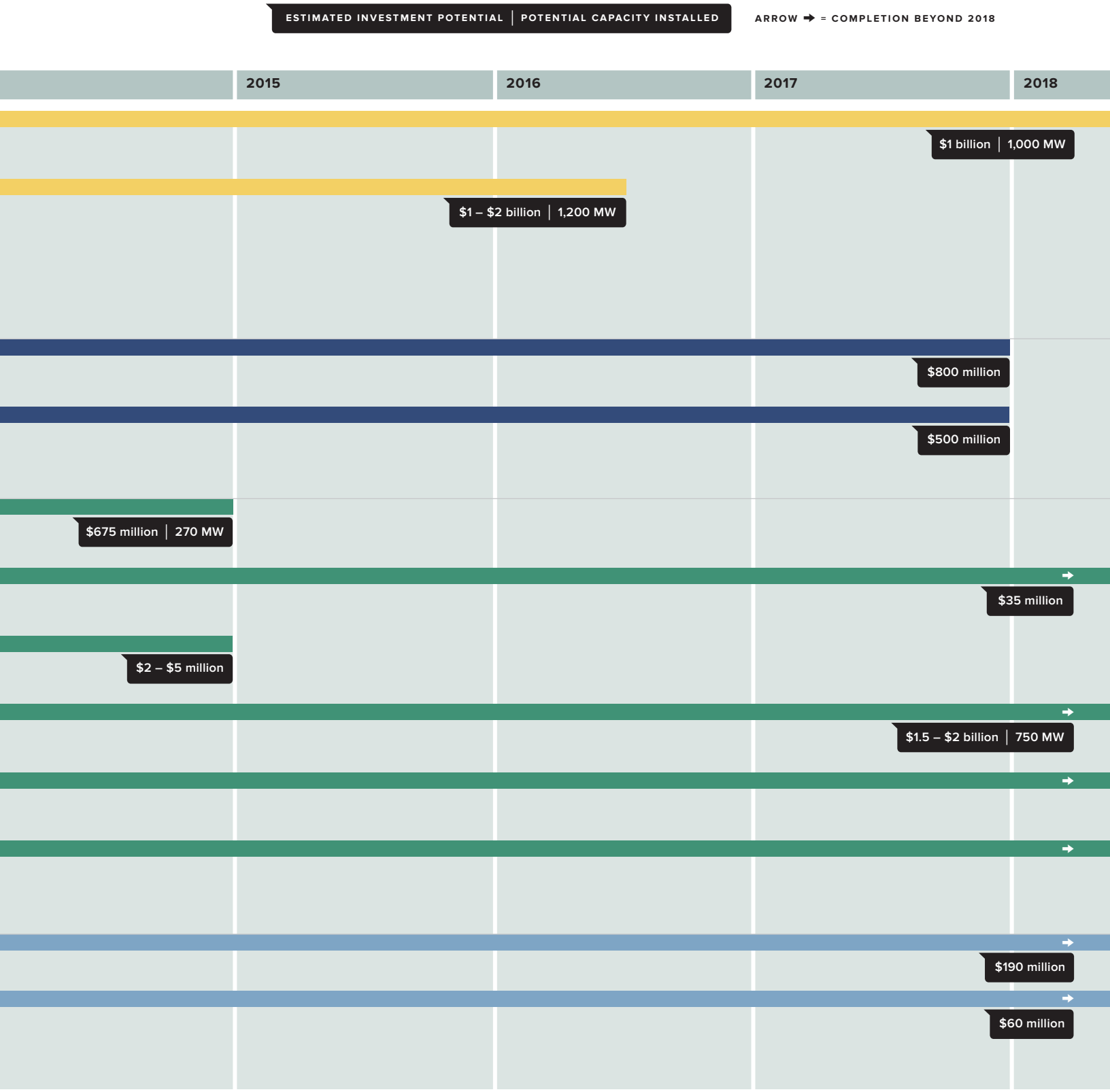
1. Definitions: New York State Department of Public Service (DPS); New York Power Authority (NYPA); Long Island Power Authority (LIPA); Investor-Owned Utilities (IOUs); New York Independent System Operator (NYISO); New York State Energy Research and Development Authority (NYSERDA); New York State Department of Environmental Conservation (DEC); New York State Department of State (DOS); Empire State Development (ESD).

LEAD PUBLIC PARTNERS[1]	PARTNERS	INITIATE	CURRENT STATUS	ESTIMATED COMPLETION DATE
DPS	NYPA, LIPA, NYISO, IOUs, Private Sector	By the end of 2012	On Schedule	In phases from 2015 to 2018
DPS	NYPA, NYISO, IOUs, Private Sector	By the end of 2012	On Schedule	Summer 2016 if needed, additional as identified
NYPA, LIPA	—	Early 2013	On Schedule	End of 2013
DPS, NYPA	IOUs	Early 2013	On Schedule	End of 2017
DPS	IOUs	By the end of 2012	On Schedule	End of 2017
NYSERDA	DPS, Private Sector	By the end of 2012	On Schedule	Awards made by summer 2013, projects in service by end of 2014
NYPA, NYSERDA	DPS	By the end of 2012	On Schedule	Ongoing
NYSERDA	NYPA, LIPA, DEC, DOS, IOUs, Private Sector	By the end of 2012	On Schedule	2014
LIPA	Private Sector	Summer 2013	On Schedule	2019 to 2020
DPS	IOUs, Private Sector	By the end of 2012	On Schedule	Ongoing, complete as needed
DEC, NYSERDA	DPS, ESD	Early 2013	On Schedule	Ongoing, open programs for applications by 2014
NYSERDA	DPS, Private Sector	Early 2013	On Schedule	Ongoing
NYSERDA, NYPA	NYISO, Academia, Federal Government, IOUs, Private Sector	Early 2013	On Schedule	Ongoing

FIGURE 1

Timeline of Energy Highway Blueprint Impacts




ESTIMATED INVESTMENT POTENTIAL | POTENTIAL CAPACITY INSTALLED
ARROW ➔ = COMPLETION BEYOND 2018
2015
2016
2017
2018
$1 billion | 1,000 MW
$1 – $2 billion | 1,200 MW
$800 million
$500 million
$675 million | 270 MW
$35 million
$2 – $5 million
$1.5 – $2 billion | 750 MW
$190 million
$60 million


SHEA'S
BUFFALO

Following the October 22, 2012 presentation of the Blueprint to Governor Cuomo, the Energy Highway Task Force agencies and authorities began action on all 13 recommendations.

Summarized on the next page is a map with the activities involved in the implementation of the Blueprint actions as of April 2013.

➔

FIGURE 2

Blueprint Actions Immediately Underway Across New York State

Western New York

Establish a Community Support Plan and a Greenhouse Gas Emissions Program
- Steps Taken: RGGI states proposed emissions cap reduction

Utilities to evaluate repowering as an alternative to power plant retirements when the plant is needed for reliability
- Steps Taken: PSC Order issued



Statewide

Develop and implement Reliability Contingency Plans to prepare for potential large power plant retirements
- Steps Taken: PSC Orders issued

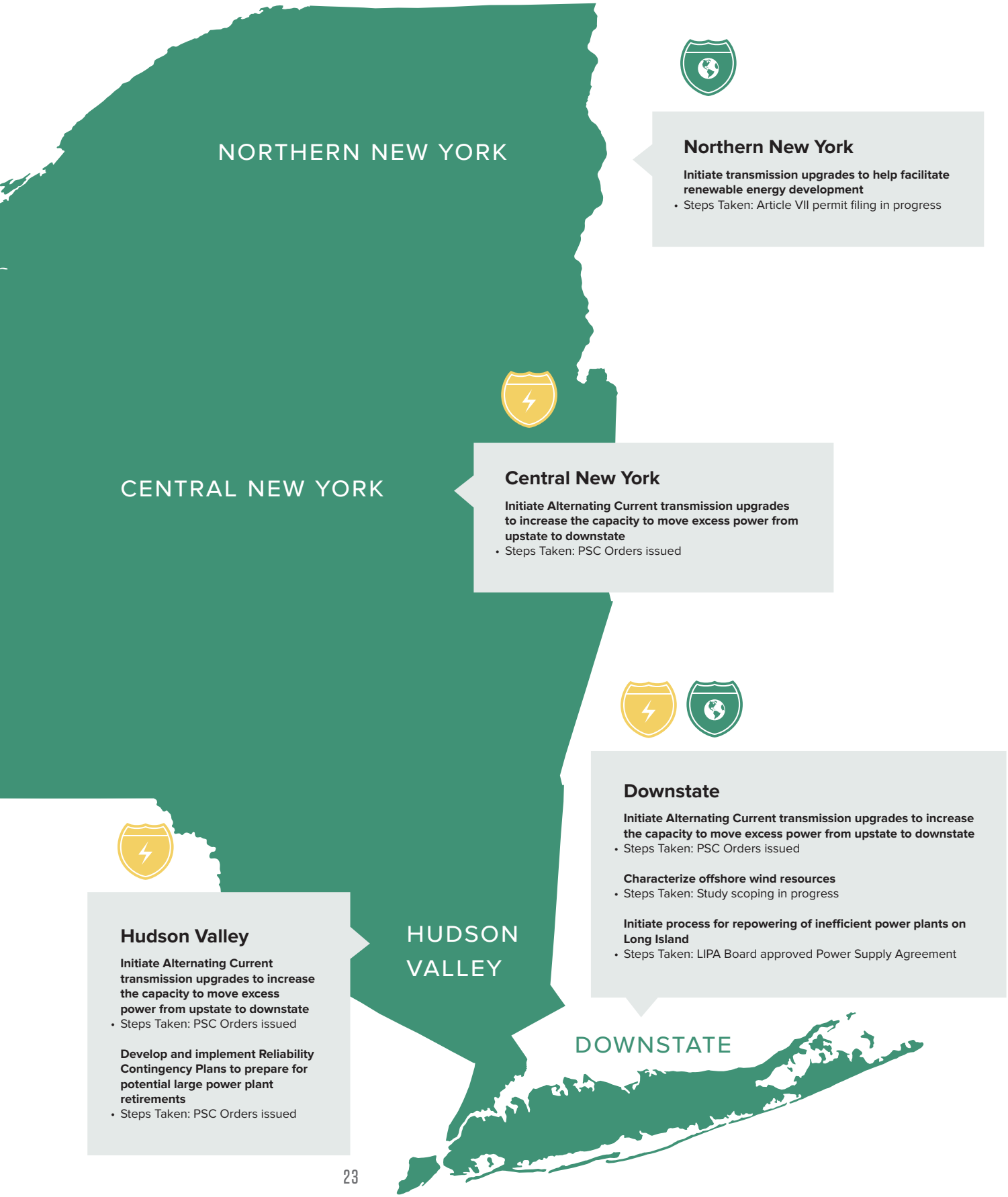
Accelerate investment in public and private sector generation, transmission, and distribution and private sector natural gas distribution
- Steps Taken: NYPA program approved by its Board; PSC Order issued

Conduct a competitive solicitation and contract for new renewable resources as part of the New York State Renewable Portfolio Standard
- Steps Taken: RFP issued

Establish a Community Support Plan and a Greenhouse Gas Emissions Program
- Steps Taken: RGGI states proposed emissions cap reduction

Utilities to evaluate repowering as an alternative to power plant retirements when the plant is needed for reliability
- Steps Taken: PSC Order issued

Fund Smart Grid demonstration projects
- Steps Taken: Awarded funding for five projects



Northern New York

Initiate transmission upgrades to help facilitate renewable energy development

- Steps Taken: Article VII permit filing in progress

Central New York

Initiate Alternating Current transmission upgrades to increase the capacity to move excess power from upstate to downstate

- Steps Taken: PSC Orders issued

Downstate

Initiate Alternating Current transmission upgrades to increase the capacity to move excess power from upstate to downstate

- Steps Taken: PSC Orders issued

Characterize offshore wind resources

- Steps Taken: Study scoping in progress

Initiate process for repowering of inefficient power plants on Long Island

- Steps Taken: LIPA Board approved Power Supply Agreement

Hudson Valley

Initiate Alternating Current transmission upgrades to increase the capacity to move excess power from upstate to downstate

- Steps Taken: PSC Orders issued

Develop and implement Reliability Contingency Plans to prepare for potential large power plant retirements

- Steps Taken: PSC Orders issued

A Four-Part Strategy

The Energy Highway Task Force identified four main areas of focus in the Blueprint that collectively address the goals and objectives identified by Governor Cuomo and in the RFI:

- **Expand and Strengthen the Energy Highway**
- **Accelerate Construction and Repair**
- **Support Clean Energy**
- **Drive Technology Innovation**

As part of a transparent process, the Energy Highway Task Force has compiled an update on each of the actions identified in the Blueprint issued in October 2012.

Expand and Strengthen the Energy Highway



Accelerate Construction and Repair



Support Clean Energy



Drive Technology Innovation



ESTIMATED INVESTMENT POTENTIAL

Up to $2 billion

POTENTIAL CAPACITY INSTALLED

Up to 2,200 MW of transmission and generation capacity by 2018

EXPECTED BENEFITS

Enhance reliability; increase system operations flexibility; address major planning uncertainties; reduce transmission congestion and improve efficiency

Expand and Strengthen The Energy Highway



A key component of the Energy Highway initiative is the modernization of the State's generating and transmission infrastructure. While New York has a reliable electric system, critical infrastructure is aging and in urgent need of replacement and some of these facilities have uncertain futures. The Energy Highway Blueprint looks to leverage ongoing in-kind replacement of aging infrastructure and identify specific areas to expand transmission capacity to move excess power from upstate power plants to downstate, while providing significant reliability, economic, and environmental benefits. The following actions laid out in the Blueprint improve the efficiency of the Energy Highway system and benefit New York residents and businesses:

- Initiate Alternating Current transmission upgrades to increase the capacity to move excess electric power from upstate to downstate
- Develop and implement Reliability Contingency Plans to prepare for potential large power plant retirements
- Provide public power entities flexibility in contracting for public-private partnerships

ACTION → Initiate Alternating Current transmission upgrades to increase the capacity to move excess power from upstate to downstate

STEPS TAKEN

PSC Orders issued regarding AC transmission upgrades

ASSIGNED AGENCY

New York State Department of Public Service

PARTNERS

New York Power Authority, Long Island Power Authority, New York Independent System Operator, Investor-Owned Utilities, Private Sector

INITIATE

By the end of 2012

ESTIMATED COMPLETION DATE

DPS permitting process complete in time to begin construction by 2014; projects to be completed in phases, expected from 2015 to 2018

ESTIMATED INVESTMENT POTENTIAL

$1 billion for a total of over 1,000 MW of increased capacity

Introduction

The Energy Highway Task Force recommended in the Blueprint that the DPS call for projects that relieve congestion between the Mohawk Valley Region, the Capital Region, and the Lower Hudson Valley.

Steps taken since Blueprint Issuance

The New York Public Service Commission (PSC) issued an Order on November 30, 2012 (Case 12-T-0502) instituting a proceeding and asked for Statements of Intent from developers (by January 25, 2013) to develop projects. A Technical Conference was held with interested parties to the proceeding on December 17, 2012. DPS received Statements of Intent from New York Transco, NextEra Energy Resources, Boundless Energy NE, West Point Partners, Cricket Valley Energy Center, and North America Transmission, for a total of six responses, which can be found on the DPS website (www.dps.ny.gov).

Current Status

On Schedule

Path Forward

On April 18, 2013, the PSC issued an Order establishing a competitive Article VII process to consider alternatives, with initial project Article VII applications due

While New York has a reliable electric system, critical infrastructure is aging and in urgent need of replacement, and some of these facilities have uncertain futures.

to the PSC by October 1, 2013. In the intervening period, the issues of cost allocation, cost recovery, risk mitigation and additional regulation revisions required to carry out the competitive Article VII process will be addressed.

ACTION → Develop and implement Reliability Contingency Plans to prepare for potential large power plant retirements

STEPS TAKEN

PSC Orders issued regarding Reliability Contingency Plan

ASSIGNED AGENCY

New York State Department of Public Service

PARTNERS

New York Power Authority, New York Independent System Operator, Investor-Owned Utilities, Private Sector

INITIATE

By the end of 2012

ESTIMATED COMPLETION DATE

Proceed with project development by 2014 if needed, so that necessary new resources would be in place by summer 2016

ESTIMATED INVESTMENT POTENTIAL

Dependent on selected solution, estimated to be between $1 billion and $2 billion for approximately 1,200 MW of additional capacity if needed, additional requirements may be identified in the contingency plans

Introduction

The Energy Highway Task Force recommended in the Blueprint that DPS implement a process to develop Reliability Contingency Plans to avoid the possibility of additional costs to customers and ensure a reliable supply of power for cases in which the retirement of a power plant in New York raises significant risks and uncertainties.

Steps taken since Blueprint issuance

The PSC issued an Order on November 30, 2012 (Case 12-E-0503) instituting a proceeding and soliciting an Indian Point Contingency Plan, assigning Con Edison as the responsible transmission owner with assistance from NYPA. A technical conference was held on January 14, 2013 with interested parties. The Reliability Contingency Plan for the Indian Point Energy Center was filed on February 1, 2013, with comments received by February 22, 2013.

Current Status
On Schedule

Path Forward
Following approval from the PSC in a March 2013 Order, NYPA issued an RFP for a target of 1,350 MW of generation and transmission capacity on April 3, 2013, with responses due by May 20, 2013. In an April 2013 Order, the Commission allowed the utilities to undertake preliminary development activities for their proposed transmission solutions (subject to further review and action when the Commission reviews the RFP responses), required Con Edison to file a more refined Energy Efficiency and Demand Reduction plan within 45 days of the Order, and directed DPS staff to issue a straw proposal to address cost recovery and cost allocation issues for further comments.

ACTION → Provide public power authorities flexibility in contracting for public-private partnerships

STEPS TAKEN
Legislation being drafted

ASSIGNED AGENCY
New York Power Authority, Long Island Power Authority

INITIATE
Early 2013

ESTIMATED COMPLETION DATE
End of 2013

Introduction
Given that the Blueprint includes actions with a focus on a potential combination of public and private financing, the Task Force recommended supporting the statutory changes necessary for public power authorities to participate in public-private partnerships.

Steps taken since Blueprint issuance
Legislation is being drafted for consideration in the 2013 Legislative session.

Current Status
On Schedule

Path Forward
Legislation is planned to be introduced in the 2013 Legislative session.







ESTIMATED INVESTMENT POTENTIAL

$1.3 billion

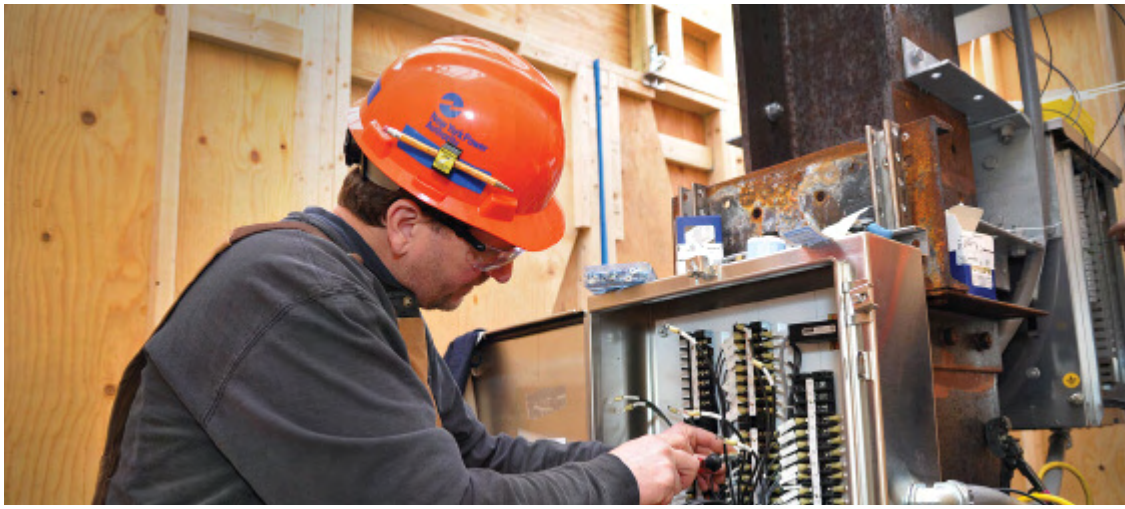
EXPECTED BENEFITS

Strengthen reliability, safety, and storm resilience; reduce costs to consumers; reduce emissions

Accelerate Construction and Repair

The Task Force recognizes the opportunity to accelerate the repair and construction of the electric and gas systems in New York, with the dual benefits of improving environmental safety and reliability, while also stimulating economic development in the State. Some of these projects can also lead to immediate consumer benefits in terms of reduced fuel costs, reductions in emissions, and increased storm resilience. The Task Force called for the following actions in the Blueprint:

- Accelerate investments in electric generation, transmission, and distribution to strengthen reliability, safety, and storm resilience
- Accelerate investments in natural gas distribution to reduce costs to consumers and promote reliability, safety, and emission reductions



ACTION → Accelerate investments in electric generation, transmission, and distribution for reliability, safety, and storm resilience

STEPS TAKEN
NYPA program approved by its Board

ASSIGNED AGENCY
New York State Department of Public Service, New York Power Authority

PARTNERS
Investor-Owned Utilities

INITIATE
Early 2013

ESTIMATED COMPLETION DATE
By the end of 2017

ESTIMATED INVESTMENT POTENTIAL
$800 million over five years

Introduction

In the Blueprint, the Task Force encouraged the acceleration of cost-effective initiatives or projects to create near-term jobs and improve the electric generation, transmission, and delivery systems, suggesting DPS work within existing and new rate cases and other proceedings to help accelerate specific utility projects that would improve reliability and/or safety. The Task Force recommended that NYPA, with the consent of its Board of Trustees, consider accelerating spending in its 10-year capital plan and operations and maintenance budget over the next five years.

In late October, Superstorm Sandy impacted service to many downstate customers. The Governor appointed four Commissions to review utility preparation and performance and to develop actions to prepare for future events. The Commissions' recommendations are in line with, and expand upon, the identified acceleration of investments.

Steps taken since Blueprint issuance

As the initial implementation for electric utilities, the PSC issued an Order on March 15, 2013 (Case 12-E-0201) approving National Grid's electric rate plan, and will also address this initiative as part of the Con Edison (Case 13-E-0030) rate case and the Central Hudson-Fortis (Case 12-M-0192) merger case, both pending before the PSC.



Replacement of older pipes reduces potential for leaks, improves safety, and leads to reduced emissions of methane, a contributor to global warming when it is leaked into the environment.

NYPA has updated their budget plan to include increased investments in several infrastructure projects, with a primary emphasis on NYPA's aging transmission system. NYPA's Board of Trustees approved investments relating to the Transmission Life Extension and Modernization Project as part of this initiative. NYPA has initiated select projects and is on track with plans to move forward with accelerating $300 million in electric generation and transmission investments over the next five years.

Current Status
On Schedule

Path Forward
In each upcoming rate case, and as other opportunities arise outside of rate cases, DPS will address the initiative. DPS will reassess the current stated scope of incremental utility capital spending in light of the recommendations from the recently appointed Commissions. NYPA will continue to implement this initiative with additional projects going forward.

ACTION → Accelerate investments in natural gas distribution to reduce costs to customers and promote reliability, safety, and emission reductions

STEPS TAKEN
PSC Order issued concerning investments in natural gas

ASSIGNED AGENCY
New York State Department of Public Service

PARTNER
Investor-Owned Utilities

INITIATE
By the end of 2012, DPS to issue notice on natural gas expansion policies

ESTIMATED COMPLETION DATE
By the end of 2017

ESTIMATED INVESTMENT POTENTIAL
$500 million over five years

Introduction
The Task Force called for DPS to work with regulated natural gas utilities

managing the natural gas distribution system to identify and implement near-term investments in construction and repair to help reduce costs to consumers, enhance safety, improve reliability, and reduce emissions.

Steps taken since Blueprint issuance

The PSC issued an Order on November 30, 2012 (Case 12-G-0297) instituting a proceeding to examine policies regarding the expansion of natural gas service, and facilitated a technical conference on January 9, 2013. Written comments were received on March 12, 2013 from over 100 parties. DPS staff has convened a series of working group meetings, including one focusing on New York City and how expansion of the natural gas system can be coordinated with New York City's Clean Heat Program.

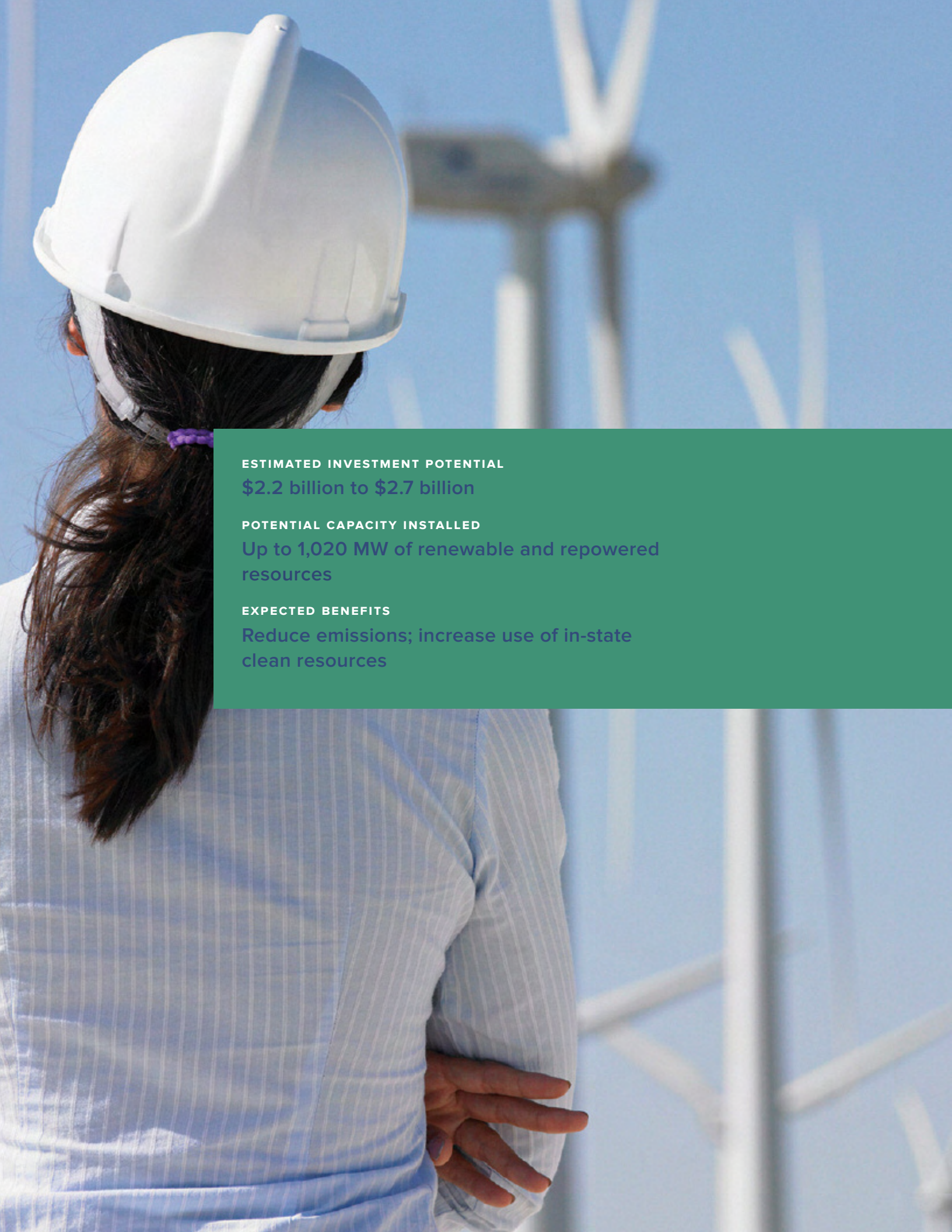
Additional acceleration of capital expenditures for gas (e.g. leak-prone pipe replacement) will be addressed in the context of rate cases and other proceedings. As the initial implementation for natural gas utilities, the PSC issued an Order on March 15, 2013 (Case 12-G-0202) approving National Grid's gas rate plan.

Current Status

On Schedule

Path Forward

DPS staff plans to continue work to address any identified barriers as well as issues surrounding natural gas vehicles and the use of compressed and liquefied natural gas in New York State. DPS staff will continue to address the acceleration of capital expenditures in pending or upcoming rate cases and as other opportunities arise. This initiative will initially be addressed as part of the Con Edison (Case 13-G-0031) rate case, the Central Hudson-Fortis (Case 12-M-0192) merger case, and the National Grid (Case 12-G-0544) earnings case, all of which are currently pending before the PSC.



ESTIMATED INVESTMENT POTENTIAL

$2.2 billion to $2.7 billion

POTENTIAL CAPACITY INSTALLED

Up to 1,020 MW of renewable and repowered resources

EXPECTED BENEFITS

Reduce emissions; increase use of in-state clean resources

Support Clean Energy



The Energy Highway Blueprint called for the support of clean energy as an essential component to an environmentally sustainable future for New York State. While the restructured markets are geared towards delivering electricity at the lowest cost to consumers, the Task Force recognizes the need for the State to undertake additional measures to facilitate a more environmentally sustainable future within the restructured energy market. In the Energy Highway Blueprint, the Task Force called for action to continue New York's commitment to growing the renewable energy industry and improving environmental quality:

- Conduct a competitive solicitation for new renewable energy resources as part of the New York State Renewable Portfolio Standard (RPS)
- Initiate transmission upgrades in Northern New York and other areas as needed to help facilitate renewable energy development
- Characterize offshore wind resources
- Initiate process for repowering of inefficient power plants on Long Island
- Require utilities to evaluate repowering as an alternative to power plant retirements when the power plant is needed for reliability
- Establish a Community Support Plan and Greenhouse Gas Emissions Reduction Program in the electricity sector

ACTION → Conduct a competitive solicitation for new renewable energy resources in New York as part of the State's Renewable Portfolio Standard

STEPS TAKEN

RFP issued under RPS program

ASSIGNED AGENCY

New York State Energy Research and Development Authority

PARTNERS

New York State Department of Public Service, Private Sector

INITIATE

By the end of 2012

ESTIMATED COMPLETION DATE

Announce awards by Summer 2013, new projects expected to be in-service by end of 2014

ESTIMATED INVESTMENT POTENTIAL

Up to $675 million for 270 MW

Introduction

As part of New York State's continued commitment to the development of renewable resources, the Energy Highway Task Force called for the issuance of a competitive solicitation, or Request for Proposals (RFP), for $250 million, which is expected to leverage a total investment of $675 million and result in approximately 270 MW of new renewable resources. Technologies eligible to participate in the RPS program include wind, hydroelectric, solar, biomass, and other clean-energy resources, and will not only help expand the State's renewable energy portfolio, but will assist the State in reducing its carbon footprint.

Steps taken since Blueprint issuance

The Request for Proposals (RFP) was finalized and was issued on December 20, 2012, and then reissued on January 4, 2013 to reflect the extension of the federal production tax credits. Application packages and provisional certification applications were received by January 28, 2013. Bid proposals were received on February 14, 2013.

Current Status

On Schedule

Path Forward

Responses to the RFP will be evaluated based on expected economic benefits to the State and bid price. Awards are expected to be announced by Summer 2013.[2]

ACTION → Initiate transmission upgrades in Northern New York to help facilitate renewable energy development

STEPS TAKEN

Article VII permit filing in progress for transmission upgrades

ASSIGNED AGENCIES

New York Power Authority, New York State Energy Research and Development Authority

PARTNER

New York State Department of Public Service

INITIATE

By the end of 2012

ESTIMATED COMPLETION DATE

Ongoing; Pending the timely receipt of approvals, it is anticipated that the Moses-Willis upgrades can be completed by the end of 2013; If other upgrades are deemed cost-effective it is expected that design and construction could occur in the 2014–2015 time period

ESTIMATED INVESTMENT POTENTIAL

$35 million

Introduction

In order to facilitate further development of upstate renewable energy projects, the Task Force recommended that cost-effective targeted investments in transmission infrastructure in Northern New York be undertaken to reduce bottlenecks affecting energy from renewable resources.

Steps taken since Blueprint issuance

The NYISO's Growing Wind report identified up to four potential upgrades in transmission infrastructure owned by NYPA in the Clinton and Franklin

2. NYSERDA filed a petition with the PSC on December 14, 2012 requesting a change to the RPS rules; NYSERDA will make awards under the current RFP only after a PSC determination on this petition is provided.

counties of Northern New York that would alleviate existing renewable energy bottlenecks. NYPA has begun preparations for upgrades on the Moses-Willis transmission line, and has filed an Article VII Amendment application. NYPA has conducted outreach efforts with local elected officials in Massena, NY. NYPA is currently drawing up plans to evaluate the cost-effectiveness of undertaking the remaining suggested upgrades.

Current Status
On Schedule

Path Forward
Pending all necessary approvals (including PSC approval) work on the Moses-Willis line is scheduled to start in the Fall of 2013. In addition to the Moses-Willis line upgrades, NYPA plans to evaluate the cost-effectiveness of the other projects identified in the NYISO study. This evaluation will be undertaken in the Fall of 2013 with design and construction activities following as needed.

ACTION → Characterize offshore wind resources

STEPS TAKEN
Development of offshore wind study scope in progress

ASSIGNED AGENCY
New York State Energy Research and Development Authority

PARTNERS
New York State Department of Environmental Conservation, New York State Department of State, New York Power Authority, Long Island Power Authority, Private Sector

INITIATE
By the end of 2012

ESTIMATED COMPLETION DATE
Conduct studies in 2013 - 2014

ESTIMATED INVESTMENT POTENTIAL
$2 million to $5 million

Introduction
In the Energy Highway Blueprint, the Task Force recommended building upon earlier preliminary site assessments of the offshore region bordering



The Task Force recommended targeted investments in Northern New York to reduce bottlenecks affecting energy from renewable resources.





New York and pursuing more targeted site assessments through field studies to gauge suitability for wind power, while assembling vital data for the successful development of projects along New York's Atlantic coast.

Steps taken since Blueprint issuance

Meetings have been held between NYSERDA, New York State Department of State (DOS), and NYPA to discuss roles and responsibilities and to interface with federal government agencies involved with offshore wind. NYSERDA is working with DOS, DEC, NYPA, and DPS to develop a biological, environmental, meteorological, and geological research plan that is complementary with the United States Department of Interior's Bureau of Ocean Energy Management (BOEM)[3] requirements under the lease process underway for the New York-Long Island Wind project.

NYSERDA plans to hold workshops and meetings with stakeholders (State and Federal regulators, scientists, industry, and environmental groups) to facilitate collaborative agreement regarding wildlife issues relating to the orderly development of marine wind energy off New York's coast. NYSERDA is developing plans with the Biodiversity Research Institute to facilitate the coordination of wildlife issues.

Current Status

On Schedule

Path Forward

Federal agencies involved will be invited to meetings to discuss roles, responsibilities, and current projects, which will be essential to prevent duplication of effort and ensure wise use of funds. Uncertainties associated with the Federal sequestering may require adjustments in project schedule or approach. The Biodiversity Research Institute has identified steering committee members and other project participants for the biological research. NYSERDA, DOS, DEC, NYPA, and DPS will next 1) identify research into what physical characteristics (meteorological and geological) and human use (fishermen and recreational) would provide the least harmful impact, 2) determine how such research should be performed, 3) decide on jurisdiction/responsibility, and 4) accordingly contract to execute the plan.

3. Siting and permitting of offshore wind energy resources in federal waters fall under the jurisdiction of the United States Department of Interior's Bureau of Ocean Energy Management (BOEM).

ACTION → Initiate process for repowering of inefficient power plants on Long Island

STEPS TAKEN
LIPA Board approved Power Supply Agreement

ASSIGNED AGENCY
Long Island Power Authority

PARTNERS
Private Sector

INITIATE
Summer 2013, initiate the process and issue Request for Proposals working with National Grid Generation LLC

ESTIMATED COMPLETION DATE
One or more legacy power plants could be repowered by 2019 to 2020

ESTIMATED INVESTMENT POTENTIAL
$1.5 billion to $2 billion for approximately 750 MW of repowered generating capacity

Introduction

As one of the Task Force's action items to further facilitate a more environmentally sustainable future in New York, this initiative recommended that LIPA, working in public-private partnership with National Grid, issue a Request for Proposals to initiate the repowering process for aging power plants on Long Island.

Steps taken since Blueprint issuance

In October, LIPA's Board of Trustees approved an amended 15-year power supply agreement with National Grid that would enable it to continue to meet the electricity needs of its customers. A key component of the agreement establishes procedures to perform an economic study on the feasibility of a potential repowering of the Port Jefferson, E.F Barrett (Island Park), and Northport steam plants, as well as the Barrett and Holtsville combustion turbine sites.

Current Status

On Schedule



Path Forward

The Power Supply Agreement is currently pending approvals from the New York State Comptroller and the New York State Attorney General. National Grid is expected to commence the Request for Proposals process for assessing the viability of repowering the E.F. Barrett and Port Jefferson steam plants following the commencement date of the Agreement.

ACTION → Require utilities to evaluate repowering as an alternative solution for power plant retirements where the power plant is expected to be needed for reliability

STEPS TAKEN

PSC Order issued to evaluate repowering

ASSIGNED AGENCY

New York State Department of Public Service

PARTNERS

Investor-Owned Utilities, Private Sector

INITIATE

By the end of 2012

ESTIMATED COMPLETION DATE

Ongoing as power plant retirements are announced or identified

Introduction

As part of the Energy Highway Blueprint, the Task Force recommended that DPS require electric utilities to perform analysis of pending or potential power plant retirements in cases where the plant is needed for reliability reasons, specifically focused on the opportunity to repower the subject plants as an alternative to closure or system upgrades.

Steps taken since Blueprint issuance

The PSC issued an Order on January 18, 2013 (Case 12-E-0577) requiring National Grid and NYSEG to conduct an analysis of repowering of Dunkirk and Cayuga facilities. On February 17, 2013, both utilities filed their projected costs of the transmission alternatives that they propose to implement, and solicited bids from the plant owners for the level of out-of-market support required to finance the repowering of their facility. Bid responses were received from the utilities on March 19, 2013.

Current Status
On Schedule

Path Forward
National Grid and NYSEG are expected to file their analysis and recommendations by May 2, 2013.

ACTION → Establish a Community Support Plan and Greenhouse Gas Emissions Reduction Program in the electricity sector

STEPS TAKEN
RGGI states proposed emissions cap reduction

ASSIGNED AGENCIES
New York State Department of Environmental Conservation, New York State Energy Research and Development Authority

PARTNERS
New York State Department of Public Service, Empire State Development

INITIATE
Early 2013

ESTIMATED COMPLETION DATE
Ongoing, open programs for applications by 2014

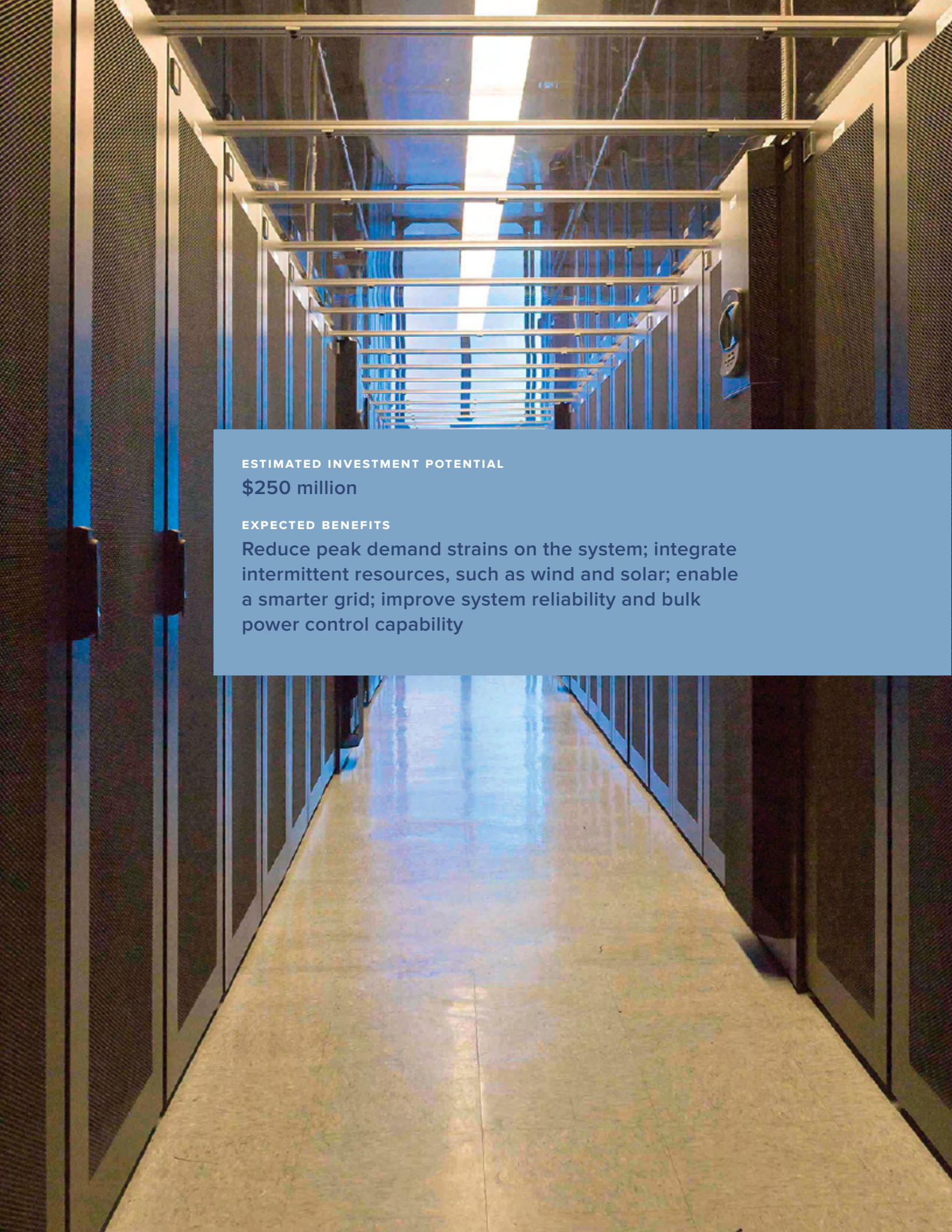
Introduction
The Energy Highway Task Force recommended the development of plans to establish a Community Support Plan and a Greenhouse Gas Emissions Reduction Program to address the issue of community impacts from retiring power plants and encourage improvements in operating power plants.

Steps taken since Blueprint issuance
Nine states, including New York, participate in the Regional Greenhouse Gas Initiative (RGGI) CO_2 cap and trade program. On February 7, 2013, the RGGI states proposed lowering the regional CO_2 emissions cap by 45 percent (a reduction of the 2014 regional RGGI cap from 165 million to 91 million tons). The cap would decline 2.5 percent each year from 2015 to 2020. Each RGGI state is expected to complete their state specific processes such that the proposed changes to the program would take effect on January 1, 2014. This reduction is expected to generate addi-

tional revenue for reinvestment, some of which could be available to fund the new programs recommended in the Blueprint to offset the adverse impacts of power plant retirements on host communities and to promote more efficient plant operation.

Current Status
On Schedule

Path Forward
Rulemaking is expected to complete by the end of 2013. Action from the New York State Legislature is needed to use RGGI auction proceeds to reimburse communities for lost local revenues.



ESTIMATED INVESTMENT POTENTIAL

$250 million

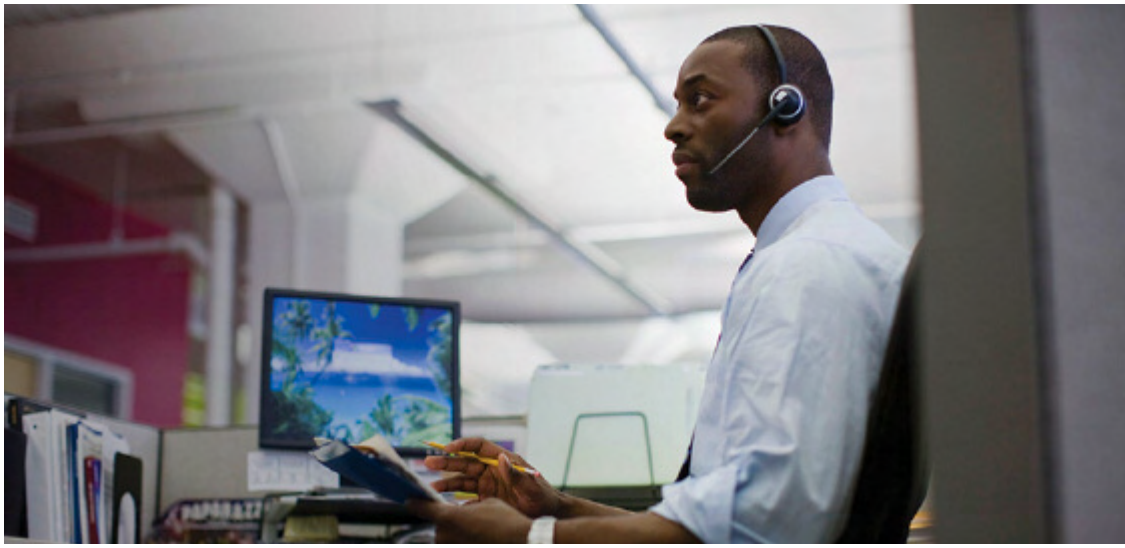
EXPECTED BENEFITS

Reduce peak demand strains on the system; integrate intermittent resources, such as wind and solar; enable a smarter grid; improve system reliability and bulk power control capability

Drive Technology Innovation

Advancements in Smart Grid technologies and other emerging tools for the energy system have the potential to transform the electric system by improving utility operations and providing consumers with the means to better manage their electricity use. The Energy Highway Blueprint works toward the goal of advancing the 21st century grid that best benefits system performance and operations. The Task Force recommended the following actions as part of the Blueprint:

- Fund Smart Grid demonstration projects
- Develop an Advanced Energy Management System Control Center and pursue federal energy research grants



ACTION → Fund Smart Grid demonstration projects

STEPS TAKEN

Awarded funding for five projects and initiated solicitation process for additional Smart Grid projects

ASSIGNED AGENCY

New York State Energy Research and Development Authority

PARTNER

New York State Department of Public Service, Private Sector

INITIATE

Early 2013

ESTIMATED COMPLETION DATE

Ongoing

ESTIMATED INVESTMENT POTENTIAL

$190 million

Introduction

In the Energy Highway Blueprint, the Task Force recommended that the Smart Grid Technology and Market Development Program be leveraged to apply advanced technologies to further improve power flows throughout the system and contribute to a more environmentally sustainable power sector.

Steps taken since Blueprint issuance

Since the issuance of the Blueprint, NYSERDA awarded nearly $2.6 million for five projects to support research and engineering studies, product development, and demonstration projects that improve the reliability, efficiency, quality, and overall performance of the electric power delivery system in New York State. Overall in 2012, NYSERDA awarded approximately $9 million for 17 projects. In addition, the Federal Energy Regulatory Commission (FERC) approved New York State's proposal in the Constellation Energy settlement for $20 million to be allocated to further Smart Grid demonstration. NYSERDA has met with stakeholders for input, with the objective to improve grid resiliency. NYSERDA worked with DPS and other stakeholders to develop a new round of solicitation(s) in support of Smart Grid R&D, focusing on projects that reinforce the reliability and performance of the bulk transmission system consistent with the Constellation Energy settlement with the FERC.

Current Status
On Schedule

Path Forward
NYSERDA anticipates issuing a new solicitation in April 2013, with tentative proposal due dates in May and October of 2013.

ACTION → Develop an Advanced Energy Management System Control Center and pursue federal energy research grants

STEPS TAKEN
Control center scoping in progress

ASSIGNED AGENCIES
New York State Energy Research and Development Authority, New York Power Authority

PARTNERS
New York Independent System Operator, New York State Smart Grid Consortium, United States Department of Energy, Investor-Owned Utilities, Academia, Private Sector

INITIATE
Early 2013

ESTIMATED COMPLETION DATE
Ongoing

ESTIMATED INVESTMENT POTENTIAL
$60 million, to be leveraged by additional private-sector investments

Introduction
The Task Force recommended that New York State develop an Advanced Energy Management System Control R&D Center and a Smart Energy Utility application program targeted at system operation, including the design and verification of new equipment for use in various power system applications and promoting collaborative development and testing of new technology applications that provide real time data for system applications. The Task Force further recommended the pursuit of federal energy research grants.



The goal of this large-scale federal research collaborative is to develop technologies to improve operations, reliability, security, and New York State's environmental footprint.

Steps taken since Blueprint issuance

Initial planning is underway for the Advanced Energy Management System Control R&D Center in collaboration with the Electric Power Research Institute (EPRI). Stakeholders in academia and industry have been identified and contacted to complete a thorough benchmarking effort and incorporate any lessons learned into the overall approach for moving forward.

Since 2009, DOE has invested in various Energy Innovation Hubs with funding typically up to $120 million over five years. These hubs focused on areas of research ranging from energy efficient building systems to the most recent advanced battery and energy storage hub which was awarded to Argonne National Lab. Due to recent federal funding uncertainty, it is unclear if DOE will pursue additional energy hubs at this time.

Current Status

On Schedule

Path Forward

A high-level technical plan was completed in the first quarter of 2013 that defined the approach and scope for the laboratory. Benchmarking efforts for the Advanced Energy Management System Control Center are close to complete, with plans for a lessons learned document to be issued in the second quarter of 2013. In the coming months, NYPA and NYSERDA will work to determine the Center's space requirements, including outdoor space, indoor lab space, office space, and electrical and telecommunication requirements, as well as develop operating requirements and identify staffing needs for the Center. NYSERDA will continue to monitor DOE and other federal programs for new energy research grant opportunities, and evaluate alternatives for its portion of the designated funding.

Policy Recommendation Update

The Task Force included a number of policy recommendations in the Blueprint to further advance New York's leadership in the energy industry. In many cases, initial steps have been taken to advance these policy recommendations.

In November 2012, Governor Cuomo convened three Commissions—New York State Ready, Respond, and 2100—to evaluate opportunities to improve emergency preparedness, response, and infrastructure. These Commissions reported their findings to the Governor in early January and made several recommendations consistent with the Energy Highway Blueprint, including:

- Further workforce development and training for the energy industry (NYS 2100)
- Support energy efficiency and demand-side management (NYS 2100)



- Advance renewable energy development including solar distributed generation (NYS 2100)
- Quantify the benefits associated with natural disaster mitigation in Smart Grid investments in cost-effectiveness analyses (NYS 2100)

In addition to the work of the Commissions, additional steps have been taken to advance the policy recommendations. NYSERDA and DPS are finalizing plans to conduct a comprehensive evaluation of the Renewable Portfolio Standard (RPS) program in 2013 that will consider the continuation of New York's commitment to renewable energy beyond 2015, the current policy achievement year of the RPS. NYSERDA will also be conducting an assessment of the market structure as well as the policy and cost recovery mechanisms necessary to support offshore wind.

The DPS has been reviewing capital expenditure programs for cost-effective Smart Grid technologies in various forums, including quarterly capital project meetings and rate case analysis. DPS has been working with the Investor-Owned Utilities to identify potential storm hardening projects which include various automation technologies. NYPA and NYSERDA have begun working with Investor-Owned Utilities, labor organizations, and educational institutions to support workforce development in the energy industry as recommended in the Blueprint.



Next Steps

Following this update to the Blueprint, the Task Force will disband to allow each agency to focus on its areas of responsibility. Actions will continue to be implemented by the assigned agencies. Each responsible entity should provide periodic status reports to the Governor's Office until its actions are complete.

Information on the individual actions will be available on the websites of the designated Partners for each recommendation in the Blueprint. In addition, the Energy Highway website (www.NYEnergyHighway.com) will maintain general information on the initiative and direct interested parties to the appropriate locations for further information on recent activities.





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